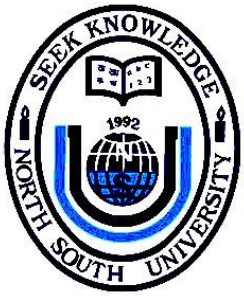
Department of Electrical and Computer Engineering
North South University



Senior Design Project

BUS FARE COLLECTION SYSTEM USING SMART CARD

SK Kamal Hossain **ID # 1712573042**

Shaifur Rahman Shawon **ID # 1712760642**

Mohammad Sifat Hasan **ID # 1721748042**

Faculty Advisor:

K. M. A. Salam

Professor

Department of Electrical and Computer Engineering

Fall 2021

Declaration

This is to declare that no part of this report or the project has been previously submitted elsewhere for the fulfillment of any other degree or program. Proper acknowledgement has been provided for any material that has been taken from previously published sources in the bibliography section of this report.

.....
SK Kamal Hossain
ECE Department
North South University, Bangladesh

.....
Shaifur Rahman Shawon
ECE Department
North South University, Bangladesh

.....
Mohammad Sifat Hasan
ECE Department
North South University, Bangladesh

Approval

The Senior Design Project entitled "**BUS FARE COLLECTION SYSTEM USING SMRT CARD**" by SK Kamal Hossain (ID # 1712573042), Shaifur Rahman Shawon (ID # 1712760642), and Mohammad Sifat Hasan (ID # 1721748042) has been accepted as satisfactory and approved for partial fulfillment of the requirement of BS in CSE degree program on June, 2021.

Supervisor's Signature

K. M. A. Salam
Professor
Department of Electrical and Computer Engineering
North South University
Dhaka, Bangladesh.

Department Chair's Signature

Dr. Rezaul Bari
Associate Professor & Chair
Department of Electrical and Computer Engineering
North South University
Dhaka, Bangladesh.

Acknowledgement

First of all, we would like to express our profound gratitude to our honorable course instructor, DR **K. M. A. Salam** (Professor) for his constant meticulous and supervision valuable suggestions, his patience and encouragement to complete the project. We would also like to thank the ECE department of North South University for providing us with the opportunity to have an industrial level design experience as part of our curriculum for the undergraduate program. Finally, we would like to thank our families and everybody who supported us and provided with guidance for the completion of this project.

Finally, we would like to thank our families and everybody who supported us and provided with guidance for the completion of this project.

Abstract

Now it is the public transportation system likely the metro is well advanced. Passenger safety convenience and the need to improve the performance of existing public transportation is driving demand for intelligent transportation system in the market. The paper-based ticket system for collecting the bus fare has been found to be a source of major financial loss in Bangladesh. It is difficult to assure the purchase of ticket by each and every passenger. Automatic bus fare collection system implemented by smart card. A smart card is given to the passenger and when passenger get into the bus, he/she has to swipe the card in the RFID reader and he has two a destination point in the device will automatically calculate the fear and detected the money automatically. The manual fare collection system has many issues which are overcome by our proposed system. Automated fare collection system for public transport using GPS is an innovative idea which reduces man power. The ticketing systems using RFID can be merged to solve the above-mentioned problems. This project actually suggests a much more public friendly, automated system of ticketing with the use of RFID based tickets. This project actually suggests a much more public friendly, automated system of ticketing with the use of RFID based tickets.